

Claims

What is claimed is:

1. An apparatus for limiting torque of a motor on a vehicle, comprising:
a torque limit determining device operable to receive a weight signal indicative of an approximate weight of the vehicle, the torque limit determining device operable to transmit a torque limit signal indicative of a torque limit for the motor as a function of the weight signal.
2. The apparatus of claim 1 wherein the torque limit signal is operable to limit the torque output of the motor.
3. The apparatus of claim 1 wherein the motor comprises an internal combustion engine.
4. The apparatus of claim 3, further comprising an engine control module coupled with the torque limit determining device to receive the torque limit signal, the engine control module further operable to receive a throttle signal indicative of a desired engine speed of the engine, the engine control module operable to transmit a fuel signal to the internal combustion engine as a function of the torque limit signal and the throttle signal, the fuel signal operable to control an amount of fuel delivered to a combustion chamber of the internal combustion engine.

5. The apparatus of claim 1 wherein the vehicle includes a transmission coupled with the engine, further comprising:

a gear ratio determining device coupled with the transmission, the gear ratio sensor operable to transmit a torque multiplier signal indicative of a gear ratio of the transmission; and

wherein the torque limit determining device is operable to be coupled with the gear ratio determining device to receive the torque multiplier signal, the torque limit determining device further operable to determine the torque limit signal as a function of the torque multiplier signal.

6. An apparatus for limiting torque of a motor on a vehicle, comprising:

a torque limit determining means for receiving a weight signal indicative of an approximate weight of the vehicle, the torque limit determining means operable to transmit a torque limit signal indicative of a torque limit for the motor as a function of the weight signal.

7. The apparatus of claim 6 wherein the vehicle includes a transmission coupled with the engine, further comprising:

a gear ratio determining means coupled with the transmission, the gear ratio determining means operable to transmit a torque multiplier signal indicative of a gear ratio of the transmission; and

wherein the torque limit determining means is operable to be coupled with the gear ratio determining means to receive the torque multiplier signal, the torque limit determining means further operable to determine the torque limit signal as a function of the torque multiplier signal.

8. A method for determining a torque limit for a motor of a vehicle, comprising:
 - determining a first value indicative of a weight of the vehicle; and
 - determining a second value indicative of a torque limit of the motor as a function of the first value.
9. The method of claim 8 wherein the motor comprises an internal combustion engine.
10. The method of claim 8, further comprising:
 - limiting the torque output of the motor as a function of the second value.
11. The method of claim 8 wherein the vehicle includes a transmission coupled with the motor, further comprising:
 - determining a third value indicative of a gear ratio of the transmission; and
 - wherein determining the second value comprises determining the second value as a function of the first value and the third value.
12. A motorized vehicle, comprising:
 - a frame;
 - an operator input device coupled with the frame and operable to transmit a desired motor output signal indicative of a desired output of a motor as a function of an operator input;
 - a weight determining device operable to determine an approximate weight of the motorized vehicle and to transmit a weight signal indicative of the approximate weight of the motorized vehicle;

a gear ratio determining device operable to transmit a torque multiplier signal indicative of a gear ratio of a transmission;

a torque limit determining device coupled with the weight determining device to receive the weight signal and with the gear ratio determining device to receive the torque multiplier signal, the torque limit determining device operable to transmit a torque limit signal indicative of a torque limit for the motor as a function of the weight signal and the torque multiplier signal;

a control module coupled with the operator input device to receive the desired motor output signal and with the torque limit determining device to receive the torque limit signal, the control module operable to transmit a fuel signal as a function of the desired motor output signal and the torque limit signal;

the motor coupled with the frame and coupled with the control module to receive the fuel signal, the motor operable to transmit a first torque as a function of the fuel signal;

a transmission coupled with the motor to receive the first torque, the transmission operable to transmit a second torque as a function of the first torque; and

a ground engaging traction device coupled with the transmission to receive the second torque, the ground engaging traction device operable to propel the motorized vehicle as a function of the second torque.

13. The apparatus of claim 12 wherein the predetermined torque does not exceed a value corresponding to the torque limit signal.